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WHITE PINE BLISTER RUST CONTROL

REGION SEVEN

CALENDAR YEAR 1961



WHITE PINE BLISTER RUST CONTROL IN THE EASTERN REGION

ANNUAL REPORT FOR 1961

United States Department of Agriculture

FOREST SERVICE

Region 7

Upper Darby, Pa.

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WHITE PINE BLISTER RUST CONTROL

U. S. FOREST SERVICE - REGION 7

CALENDAR YEAR 1961

The White Pine blister rust disease caused by the fungus cronartium ribicola, Fischer, is a serious threat to all white pine. Two host plants are required to complete the life cycle and spread of this disease. These are white pine and all varieties of both cultivated and wild currants and gooseberry plants (Ribes spp.). Control of this disease is accomplished by destroying all ribes in and near valuable stands of white pine.

Approximately 5.1 million acres of white pine justifying protection occur in Region 7. This includes the New England states, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia and Kentucky. To provide protection for this white pine, ribes populations must be maintained at a safe level on 12.6 million acres, including white pine areas and their protective borders.

OBJECTIVE OF BLISTER RUST CONTROL

The objective of this program is to establish and maintain control of the disease in all white pine areas meeting control standards by the most efficient and economical means possible.

Status of Program

Control has been established on 94% of the present area designated for protection. This indicates that the ribes population on this area offers no serious threat to the white pine selected for protection. This is designated as "maintenance area". Approximately 3½ million acres of the maintenance area are classified as requiring only cursory examinations. This is due in part to low ribes populations or, ecological or climatic conditions adverse to the spread of the disease. Approximately 98,000 acres of control area are in need of first work; 667,000 acres of rework is needed. Control area scheduled for examination in 1962 amounts to 1,871,000 acres.

ORGANIZATION AND PERSONNEL

The federal government discharges its responsibilities through 17 district leaders supervised by three area leaders in the Division of State and Private Forestry, Region 7, U. S. Forest Service. The state foresters or other state forest pest control officials, employing 51 full time state BRC employees comprises the cooperative organization for blister rust control in Region 7.

Mr. G. R. Allison was promoted to Assistant Regional Forester, Division of State and Private Forestry in August of 1961. Mr. John Kroeber transferred from the Lake States region to Upper Darby to become Branch Chief, Pest and Disease Control in Region 7.

The retirement of Harry W. Holcomb and Solon D. Conner, district leaders in New York and New Hampshire respectively, required the re-alignment of district responsibilities in these two states.

M. R. Mulholland, area leader for Maine, New Hampshire, Vermont and Massachusetts was transferred to Amherst, Mass., August 20 to become Zone Supervisor for cooperative pest control with the same area responsibilities. Miss Anna Vladish was employed as full time Clerk-Stenographer.

Donald Brown, BRC Trainee was transferred to Amherst on September 5, 1961. Hubbard Trefts, Zone Entomologist and Alfred Tegethoff, Zone Pathologist were added to the staff to carry on pest detection, evaluation and control work in the Zone.

John R. George, Supervisor in the Southern Zone transferred headquarters to 1000 High Street, Harrisonburg, Virginia. Louis Shain was transferred from the Regional office to Harrisonburg as Zone pathologist.

SCOPE OF OPERATIONS

Examinations to determine pine conditions and to locate hazardous ribes populations were carried on in ten states, four national forests and three national parks. The control area receiving attention involved 1,470,595 acres. This was 68.4% of total acreage scheduled for examination in 1961.

Pine and Infection Conditions

The acreage of white pine justifying protective measures is subject to continuing change. Reductions in pine acreage result from harvesting, wind damage, highway construction or other changes in land usage. Increased acreage resulting from natural reproduction or planted white pine tend to offset these losses. During 1961 there was a net loss of 9,500 acres of white pine as compared to the 1960 figure. The pine acreage increased in Maine, Maryland, Virginia and West Virginia. Reported decreases were in New Hampshire, Vermont, Massachusetts, Connecticut, New York and Pennsylvania.

The incident of infection on controlled area continued at a low level excepting for occasional "hot spots" in high hazard areas. No commercial damage was reported in pine areas under protection.

Ribes Infection Conditions

In 1960 sample plots were selected throughout the Region for comparison of the intensity and development of infection on ribes. Distribution of sampling areas was made on a county basis involving the ribes species common to the locality. These plots will be examined annually to provide information on rust development for "wave years" of infection.

Comparison of 1961 records with data collected in 1960 as related to all ribes species was generally as follows:

The number of leaves infected and amount leaf surface infected was generally less than in 1960. Plots showing increase in uredio spore development were offset by an equal number showing a decrease in the amount of uredio (summer stage) produced. Telia development was slightly increased over 1960. There was considerably less defoliation in 1961, indicating an extended period of telial development. However, weather conditions were generally not considered ideal for the development and spread of viable spores. This would indicate a low level for spread of infection to white pine.

Ribes Eradication

Surveys

Surveys are a necessary part of the control operations. These are made for the purpose of determining pine conditions, preparation of work maps used in control operations indicating areas requiring intensive or systematic ribes eradication.

Control Operations

A total of 1.8 million acres were examined for pine and ribes conditions. Mapping of 461,520 acres was accomplished as part of these surveys. This work required 12,675 man days.

Surveys to determine ribes conditions showed need for intensive eradication on 87,201 acres or approximately 6% of the base acreage examined. Approximately 1.7 million ribes were destroyed requiring 9,984 man days of labor.

An estimated 50% of all ribes eradication work was done by chemical means. The chemical 2,4,5-T was applied in oil or water solutions as prescribed for the various ribes species and time of application.

Total peak employment of seasonal workers amounted to 370 men.

Checking

The effectiveness of an eradication program can be determined only through checking of completed work. Checks are made on intensively worked area to determine the thoroughness of ribes eradication. Checks are also made on surveyed areas to determine scouting efficiency. Consideration is given to thoroughness of examination and destruction of ribes found on examinations.

Intensively worked area in the region amounted to 87,201 acres. Of this area 864 acres were checked or, approximately one percent of intensively worked area. The following summarizes checking performed by district leaders and control aids during 1961.

CHECKING SUMMARY

AREA REQUIRING INTENSIVE OR SYSTEMATIC ERADICATION

State	ALL WORKINGS			% OF CHECKS			By District Leaders	
	Acres Worked	Acres Checked	Man Days	Good	Average	Poor	Acres Checked	Man Days
Maine	4,389	35.9	9.7	53	16	31	35.9	9.7
New Hamp.	1,703	8.0	1.1	88	0	12	8.0	1.1
Vermont	3,755	68.0	8.7	60	23	17	55.5	7.0
Mass.	339	17.0	2.0	10	38	52	17.0	2.0
New York	32,985	486.0	52.8	50	28	22	65.0	8.0
Conn.	6,357	-	-	-	-	-	-	-
Penna.	2,358	47.7	6.7	30	8	62	39.5	5.7
Maryland	3,731	22.0	1.6	100	0	0	22.0	1.6
W. Virginia	23,179	81.2	24.4	71	16	14	81.2	24.4
Virginia	8,405	98.6	19.6	80	14	6	98.6	19.6
ALL	87,201	864.4	126.6	54	22	24	423.7	79.1

AREAS NOT REQUIRING INTENSIVE WORK

	Ribes Sites		Checking	Scout Efficiency
	Examined by Checker	Missed by Scouts	Man Days	
Maine	641	123	17.3	80%
New Hamp.	837	41	17.8	95%
Vermont	283	12	3.2	95%
Mass.	852	47	10.0	94%
New York	2,310	146	79.7	94%
Penna.	113	4	5.8	94%
W. Virginia	251	15	8.5	94%
Virginia	444	16	19.8	96%
ALL	5,731	404	162.1	94%

Training

Personnel training to develop efficiency in conducting blister rust work is an important part of the program. Recognition is given to this phase of the work through training meetings held at the Regional, area and state levels. Training of field personnel is performed at the district level. This involves training of seasonal workers including control aids, supervisors, scouts, foremen and crew members. Training is given through formal meetings and on a day-to-day basis on the job.

Informational Activities

Informational activities are an essential part of the blister rust control program. These activities are carried on for the purpose of keeping cooperating officials and the public informed on rust conditions, status of the program and financial needs to establish and maintain control of the disease.

Informational Activities were as follows:

Number of meetings held	125
Attendance at meetings	4,013
Radio & Television Programs	12
Items Published	63
Demonstrations placed	53
Show-me trips	236
Films shown	190
Attendance	11,169

Other Activities

In addition to participation in forest pest control demonstrations and blister rust meetings, blister rust personnel engaged in the following activities:

Maine Spruce Budworm Spray Project
White Pine Weevil Control Demonstrations, Penna. and New York
Oak Wilt Control, Virginia and West Virginia
White Pine Needle Blight Surveys - West Virginia

Safety

Safety is a continuing factor in all phases of the program. Safety meetings and safety checks on working conditions, equipment, the maintenance and use of vehicles are conducted to insure a high level of safety in program operations.

In Area III a safety committee was appointed to formulate safety regulations, issue timely safety bulletins and make a safety inspection of field operations in two Virginia Districts.

Safety in the other areas also received due considerations; with the exception of a few minor injuries to personnel the program operated with a high degree of safety throughout the year.

Program Needs

During 1961 considerable progress was made in reducing the backlog of control area examinations increasing the maintenance area and the placing of control area on "No Further Work Basis". Increased participation by state officials and state control aids in supervising control operations has relieved the district leaders of much of this responsibility. This leaves them free to concentrate on pine evaluation and to determine control needs in accordance with rust hazard conditions.

Continued efforts are needed to bring chemical control of ribes to the most efficient and effective level possible.

Refinement and application of rust hazard maps to individual areas should be accomplished in the shortest possible time.

Financing of the federal land programs is adequate under present conditions. Increased financing should be considered in states where there is a backlog of examination work.

SPECIAL STUDIES

Antibiotic Testing

Cycloheximide - Acti-dione-BR

The antibiotic testing program on Eastern white pine in Region 7 began in 1958. Testing was based on work done in the West in an attempt to reproduce the western results on Eastern white pine. Some 2,000 trees have been treated with Acti-dione and three of its derivatives, following prescribed methods used in the West. On the whole, results have not been as spectacular as those obtained on western white pine. A recent examination of areas in New York and New England by Virgil Moss and others indicated that from 25 to 30 percent of treated cankers appeared to be arrested in their development.

More recently applications have been made using a new formulation containing a solubilizer to increase penetration of the active ingredient in Eastern oil. Observations on these tests will be continued in 1962.

Some of the reasons for the poor results obtained to date have been given as follows:

1. Incomplete mixing of chemicals and solvents
2. The presence of water in containers or in the oil
3. Precipitation of the chemical out of solution in most Eastern No. 1 fuel oils

4. Poor judgment in selection of trees for treatment. In some trees the disease had progressed to a point of complete girdling. The low rate of metabolism of these trees probably resulted in a low quantity of chemical being absorbed into the plant tissues.
5. Time laps between mixing and application
6. Wet stems - The presence of moisture absorbs the chemical from the oil and reduces the amount of chemical carried to the infection area.
7. Inadequate coverage of stem

Phytoactin Tests

Phytoactin L-318 has been applied to pole size and mature trees as a 20% oil-water emulsion using a truck-mounted mistblower in New York. Additional testing included foliar applications by helicopter in Maine and treatment of individual trees in New England and the Southern Appalachian States. Observations on phytoactin treatments show no conclusive results so far.

Continued examinations of treated areas will be made in 1962 based on an evaluation guide for the purpose of uniformity in comparisons.

White pine seedlings were treated by a soil drench method in nurseries of Maine, Pennsylvania and West Virginia. Phytoactin in water at the rate of 200 and 400 ppm was applied at varying intervals to test resistance to the blister rust disease. The seedlings have been outplanted in high rust hazard locations and will be watched closely for rust development.

Rust Potential Hazard Maps

Considerable progress has been made in the development of disease hazard potential maps for the Region. A rough draft of the methods and procedures developed for evaluating rust potentials has been completed for final review and publication. Hazard zone maps have been developed for all states. Classification zones were determined through careful analysis of weather records including temperatures, moisture conditions and air circulation as prime factors governing infection potentials. Ribes ecology data will be analyzed and integrated into the factors determining rust hazard conditions for individual areas. Information provided from this source will be used to determine the timing and intensity of control operations necessary to maintain blister rust damage at acceptable levels.

Rust Resistant White Pine

The rust resistant white pines provided several years ago by Dr. Riker, University of Wisconsin, continue to display their blister rust resistance. Reports indicate that the resistant trees in the plot on the George Washington National Forest show no infection while practically all check trees have become infected.

HIGHLIGHTS OF ACTIVITIES BY STATES

MAINE

Pine Conditions

White pine acreage was increased by 8,000 acres due to natural seeding and planting in abandoned agricultural land and increased stocking on land previously containing insufficient white pine. Control area has decreased due to the elimination of unnecessary protection zone widths by about 8,000 acres.

White pine weevil is definitely a problem in growing quality white pine.

Phine leaf aphid is currently damaging white pine, chiefly in Washington County and coastal parts of Hancock, Waldo and Lincoln Counties. Some evidence of this insect has been also noted throughout the pine region of the State.

Infection Conditions

There has been little change from previous years in pine infection conditions on controlled areas. New infections occur to some degree each year in unprotected stands and in localized areas of high rust hazard on worked areas.

Infection on ribes was not at all uniform. It ranged from very light to heavy depending on ribes species and location. Production of telial columns seemed to be generally light.

Control Operations

Surveys and eradication accomplishments were completed according to planned programs and funds available. Control operations involved 78 cooperating towns, the White Mountain National Forest and Acadia National Park. Approximately 43% of the base acreage scheduled for examination was completed. Some 320,000 acres were surveyed for all purposes, while 4,389 acres or, roughly 1 3/4% of the base acreage, required intensive eradication.

Practically all ribes concentrations were chemically treated. New chemical equipment was tested and proved to be superior to that previously used.

Cooperative Financing

Program financing is on a cooperative basis between the U. S. Forest Service, the State and cooperating towns. The Maine Forest Service agreed in 1961 to provide all chemicals, equipment and supplies formerly provided from federal funds. Federal funds were also provided for three district leaders' salaries, expenses and operation of federal vehicles. Additional funds were provided for seasonal labor by the federal government on a reimbursing basis. The Maine Forest Service employed three field assistants.

SUMMARY OF ACCOMPLISHMENTS

Ownership	E R A D I C A T I O N						SURVEYS	
	INTENSIVELY WORKED AREA						ALL TYPES	
	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P White Mtn. N. F.	214	1,933	2,242	4,389	1,244	359	75,844	982
	-	-	-	-	-	2	1,448	26
Total	214	1,933	2,242	4,389	1,244	361	77,292	1,008

* Thousands

STATUS OF CONTROL

Ownership	CONTROL AREA ACREAGE					No Further Work	Scheduled for Exam 1962
	White Pine	Control Area	Initial Worked	On Maintenance			
				Acres	%		
S&P White Mtn.	949,158	2,140,305	2,080,058	1,898,552	88.7	126,385	554,532
N. F. Acadia	839	1,533	1,533	1,533	100	0	603
N. P.	3,500	17,318	17,318	17,318	100	0	-
Total	953,497	2,159,156	2,098,909	1,917,403	88.8	125,385	555,135

NEW HAMPSHIRE

Pine Conditions

A small decrease in white pine acreage was reported in New Hampshire, principally as the result of careful evaluation of pine to eliminate sub-standard areas.

White pine weevil is a problem in New Hampshire and pine leaf aphid damage is noticeable in some sections.

Infection Conditions

Very little new white pine infection was found on maintenance areas except for an occasional small area where ribes have persisted. Infection on ribes varied considerably. Telial development was light even in areas where infection on ribes was heavy.

Control Operations

The base acreage surveyed to determine pine and ribes conditions amounted to 335,000. This exceeded the acreage scheduled for examination by about 27%.

Intensive eradication was necessary on 1,700 acres or about one-half of one percent of base acres examined. Work was performed in 115 towns and in 3 ranger districts on the White Mountain National Forest.

The use of chemicals for ribes control was increased. Practically all concentrations were sprayed. Chemical control was also increased on scout eradication to destroy scattered bushes in the course of examinations. Improved equipment has been provided. One quart Eagle oilers and two quart Goldenrod oilers provided with spray nozzles have been used successfully for treating ribes found on surveys.

Cooperative Financing

Program financing is on a cooperative basis between the State, towns and federal government. Federal funds are provided through reimbursement based on the amount of funds expended by cooperating agencies. Federal funds also provided for salaries and expenses of three district leaders. Seven full time state control aids were employed to survey, map and supervise seasonal labor. Funds were adequate to accomplish program needs.

SUMMARY OF ACCOMPLISHMENTS

Ownership	E R A D I C A T I O N					S U R V E Y S		
	I N T E N S I V E L Y W O R K E D A R E A					A L L T Y P E S		
	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P	762	154	717	1,633	241	346	448,787	3,168
White Mtn. N. F.	70	-	-	70	4	2	435	10
Total	832	154	717	1,703	245	348	449,222	3,178

* Thousand

STATUS OF CONTROL

Ownership	CONTROL AREA ACREAGE					No Further Work	Scheduled for Exam 1962
	White Pine	Control Area	Initial Worked	On Maintenance			
				Acres	%		
S&P	1,235,581	2,383,566	2,383,062	2,325,831	97.6	314,510	265,752
White Mtn.	1,173	2,194	2,194	2,194	100	-	-
N. F.							
Total	1,236,754	2,385,256	2,385,025	2,328,025	97.6	314,510	265,752

VERMONT

Pine Conditions

As the result of careful evaluation of white pine areas there was a net loss of 9,000 acres of white pine. This was due mainly to low quality and poor stocking conditions.

White pine weevil damage is resulting in considerable quality reduction throughout the state. Pine leaf aphid is heavy through the north central part of the state resulting in some mortality and considerable growth loss. Regardless of other insects and diseases affecting white pine, the State Pest Control people still consider blister rust the number one enemy.

Infection Conditions

There has been little change from previous years in infections on white pine. New infections are limited in controlled areas except for occasional "hot spots" where ribes have persisted. New infections are still found every year in areas where control has been established or maintained.

Infection on ribes varied considerably from light to heavy and followed the general pattern of infection observed in the New England states. The influence of microclimates was considered a factor in the wide range of infection within relatively limited areas.

Control Operations

Control operations to determine pine and ribes conditions involved surveys on approximately 60,000 acres. This was about 34% of the base acreage scheduled for 1961. Current examinations were generally limited to the cooperating towns in the 1961 program.

Intensive eradication was necessary on 3,755 acres or 6% of the base acreage surveyed.

Chemically control of ribes was increased considerably in Vermont during 1961. New equipment provided was considered an improvement over previous equipment.

Cooperative Financing

The Vermont Department of Forests and Parks provides three full-time blister rust control aids. Program funds came from general funds made available by Legislature to the Director. With the exception of a small amount of federal funds reserved for the purchase of chemicals and other supplies, all remaining federal funds are made available to the state on a reimbursement basis.

During 1961 cooperative funds for the employment of seasonal labor were provided in 16 towns.

SUMMARY OF ACCOMPLISHMENTS

	<u>E R A D I C A T I O N</u>						<u>S U R V E Y S</u>	
	INTENSIVELY WORKED AREA						ALL TYPES	
Ownership	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P Green Mtn. N. F.	819	140	2,796	3,755	382	45	71,486	524
	-	-	-	-	-	-	-	-
Total	819	140	2,796	3,755	382	45	71,486	524

* Thousands

STATUS OF CONTROL

Ownership	<u>CONTROL AREA ACREAGE</u>					No Further Work	Scheduled for Exam. 1962
	White Pine	Control Area	Initial Worked	Acres	%		
S&P Green Mtn. N. F.	171,983	646,776	633,787	551,276	85.2	49,142	132,733
	439	1,826	1,826	1,826	100	-	1,826
Total	172,422	648,602	635,613	553,102	85.2	49,142	134,559

MASSACHUSETTS

Pine Conditions

Pine acreage in Massachusetts remains fairly constant. Losses due to harvesting, fire highway and urban development and evaluation of existing stands were slightly in excess of increases from planting and natural reproduction. There was a net loss of some 3,000 acres.

White pine weevil is also considered a problem in this state.

Pine leaf aphid damage has not been reported, probably due to the absence of the secondary host of the insect.

Infection Conditions

Pine and ribes infection conditions followed the general pattern for all New England states. Pine infections on maintenance area are at a very low level. occasional outbreaks of infection are found in small spots where ribes have persisted. Ribes infection varied considerably but conditions were not good for large scale spread to white pine.

Control Operations

Surveys to determine pine and ribes conditions were completed on 67,000 acres. Ribes eradication requiring intensive methods was required on only 339 acres or less than one percent of base acres surveyed. Chemical control of ribes was considerably increased.

A cut back of about 35% on all state appropriations for fiscal year 1962 resulted in the loss of all seasonal labor in early August. One full time BR control aid was released at the end of September.

Considerable progress was made in classifying maintenance area on a no-further-work basis. Some 218,000 were transferred to this category as the result of current and previous examination efforts.

Cooperative Financing

Funds available were not sufficient to accomplish all ribes survey and eradication planned. At present only one full time control aid is employed by the state to assist the district leader.

A proposal to the Department of Natural Resources for additional funds to bring work in Massachusetts up to schedule was accepted. Budget requests for F. Y. 1963 are expected to include these funds. The plan will require additional funds during the next four years and will then be reduced to an amount sufficient to maintain control. If approved by Legislature, additional men will be employed to do the needed work.

SUMMARY OF ACCOMPLISHMENTS

E R A D I C A T I O N							S U R V E Y S	
INTENSIVELY WORKED AREA							ALL TYPES	
Ownership	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P Total	8	245	85	339	77	19	85,793	547

* Thousand

STATUS OF CONTROL

CONTROL AREA ACREAGE							
Ownership	White Pine	Control Area	Initial Worked	On Maint. Acres	%	No Further Work	Scheduled for Exam. 1962
S&P Total	584,944	1,408,011	1,407,866	1,378,038	97.8	1,043,103	79,548

Pine Conditions

The pine acreage is constantly changing due to harvesting or new areas becoming established by planting or natural reproduction. Examinations during 1961 resulted in discontinuing approximately 20,000 acres of pine no longer meeting standards of quality and quantity. Slightly over 11,000 acres of new pine area were added to the control area. More than one half of this increase was due to natural reseeding occurring in established control area. About 1.7 million white pine seedlings were shipped from the state nurseries for planting on state-owned and private lands.

Infection Conditions

Blister rust infection on ribes appeared to be about normal in 1961. It was reported heavier than usual in a few scattered locations on some species. Climatic conditions (temperature and moisture) during August and September were not considered conducive to a heavy incident of pine infection.

Cooperative Financing

Program financing is on a cooperative basis between the state, county and federal governments. The present level of financing is adequate to accomplish program needs.

Control Operations

Control area examination to determine white pine areas justifying protective measures was given a high priority. Areas not meeting protection standards were discontinued. Protection boundaries were determined in accordance with rust hazard conditions and reductions made wherever possible. A total of 122,314 acres of control area were discontinued while 11,364 acres of white pine and 6,846 acres of control area were added.

All control area was examined by experienced personnel for the purpose of determining control needs. A total of 194,571 acres of control area were examined. Of this 32,985 acres required intensive systematic eradication and 161,586 acres were cleared of ribes during scout examination.

Ribes eradication was conducted on two state-owned tree nurseries to protect white pine seedling stock.

An additional 9,700 acres were placed on maintenance. The total area on maintenance amounts to 1,805,495 acres or, 91% of the total control area. Of this acreage, 212,858 acres are in non-scheduled or "No Further Work" category.

SUMMARY OF ACCOMPLISHMENTS

Ownership	E R A D I C A T I O N						S U R V E Y S	
	INTENSIVELY WORKED AREA						ALL TYPES	
	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P	2,748	18,560	11,677	32,985	2,678	394	51,875	276
Totals	2,748	18,560	11,677	32,985	2,678	394	51,875	276

* Thousands

STATUS OF CONTROL

Control Area Acreage

Ownership	White Pine	Control Area	Initial Worked	On Maint.		No Further Work	Scheduled for Exam 1962
				Acres	%		
S&P	700,522	1,980,947	1,969,875	1,803,840	91	212,753	440,595
N. P.	157	1,655	1,655	1,655	100	105	-
Total	700,679	1,982,602	1,971,530	1,805,495	91	212,858	440,595

CONNECTICUT

Pine Conditions

In Connecticut white pine areas meeting standards for protection are located mainly in eight counties. Current control programs are confined chiefly to Hartford and Litchfield Counties in western Connecticut.

White pine areas are predominately small and intermingled with hardwood growth. Recurring ribes in the above mentioned counties require periodic eradication to maintain accepted levels of control.

Infection Conditions

Infection on ribes was heavier than usual on all observed species during 1961. An explosive ribes situation was found in the town of North Canaan. Vigorous new ribes, with phenomenal stem growth were found to be general. Observations indicate a considerable amount of new pine infection taking place in some locations. A study of the situation to determine control needs is planned for 1962.

Informational and service requests from the public are absorbing more of the district leaders' time each year. Occasional requests are received to mark infected trees on pine lots where selective or improvement cuttings are to be made.

Control activities were directed by Alton Miller, Research Aid. He was assisted by two full time state employees and six laborers employed on town funds.

SUMMARY OF ACCOMPLISHMENTS

E R A D I C A T I O N INTENSIVELY WORKED AREA						Ribes * Destroyed	S U R V E Y S ALL TYPES	
Ownership	Initial	Rework	Maint. Work	Total Acres	Total Man Days		Acres	Man Days
S&P Total	-	-	6,357	6,357	244	57	45,690	307

* Thousands

STATUS OF CONTROL

Control Area Acreage

Ownership	White Pine	Control Area	Initial Worked	On Maintenance		No Further Work	Scheduled for Exam. 1962
				Acres	%		
S&P Total	109,761	468,324	468,324	468,324	100	325,185	28,865

PENNSYLVANIA

Pine Conditions

White pine acreage is increasing in the western counties as a result of ACP and spoil bank plantings. Only limited acreage increase can be attributed to natural reproduction in old fields. The net acreage of white pine was reduced only slightly below the 1960 figure.

Infection Conditions

No new infections have been found on white pine areas under protection for several years. Several recent as well as old infections were observed on unprotected state lands in Forest County (Hoskill Tract). Medium to heavy infection was found on an unprotected area of native reproduction in Somerset County.

Cooperative Financing

State funds, provided through the Division of Protection in the Department of Forests and Waters are allocated to the forest districts in accordance with program needs. Federal funds provide three vehicles for state control aids in addition to salaries and expenses for two district leaders. The program is adequately financed.

Control Operations

All programmed eradication was accomplished. Approximately 2% of the base acreage examined required intensive eradication. The control area was reduced by 2,600 acres through re-evaluation of pine areas and reduced sanitation zones.

Chemical control of ribes was used to a greater extent than in previous years. Basal spray using 2,4,5-T in oil seems to give best results on ribes found in this state. There was an adequate supply of experienced workers. Peak employment amounted to eleven men. Approximately 95% of the present control area is now on maintenance.

SUMMARY OF ACCOMPLISHMENTS

Ownership	E R A D I C A T I O N						S U R V E Y S	
	I N T E N S I V E L Y W O R K E D A R E A						A L L T Y P E S	
	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P	1,266	150	942	2,358	437	84	109,686	444

* Thousands

STATUS OF CONTROL

Ownership	White Pine	Control Area	Initial Worked	O n M a i n t e n a n c e		No Further Work	Scheduled for Exam. 1962
				Acres	%		
S&P	105,695	465,545	461,815	441,300	94.7	26,295	114,995
Allegheny NF	1,037	4,475	4,235	3,960	88.4	-	-
Total	106,732	470,020	466,050	445,260	94.7	26,295	114,995

MARYLAND

Pine Conditions

Most of the white pine is located in Garrett and Alleghany Counties. Here it grows well and is a favored tree for planting. Approximately one million white pines were planted in Garrett County in 1961. Infection hazard is high and the weevil incident is above average. Forest managers are aware of these conditions but feel the species can justify protective expenditures to provide quality lumber. A total of 1,149 acres of white pine were added to the control area in Garrett County. No acreage was discarded.

Infection Conditions

Pine infection is practically nil on white pine areas that have been under protection for several years. Some young plantations in Garrett County, established in areas where scattered native infected pine and ribes were present, have recent infection. Infection on R. rotundifolium and R. cynosbati was regarded as heavy in western Maryland.

Cooperative Financing

This year the State appropriated \$5,000 for blister rust control work on private lands in Garrett County. As of July the federal portion of control funds is being provided on a reimbursement basis. The U. S. Forest Service also provides the services of a district leader. The control program is administered by the Maryland Department of Forests and Parks.

Control Operations

Results of the 1959 and 1960 chemical treatment of ribes have been highly satisfactory. In 1961, some 3,700 acres of initial and rework were cleared of ribes by chemical means. Bushes were large and ribes populations were high. Chemical treatment has proved to be the most economical method for control under these conditions.

SUMMARY OF ACCOMPLISHMENTS

Ownership	E R A D I C A T I O N						S U R V E Y S	
	INTENSIVELY WORKED AREA						ALL TYPES	
	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P	3,500	231	-	3,731	674	239	6,742	22

* Thousands

STATUS OF CONTROL

Owner- ship	White Pine	Control Area	Initial Worked	On Maintenance		No Further Work	Scheduled for Exam. 1962
				Acres	%		
S&P	72,891	171,813	171,813	152,444	88.7	54,553	5,000

VIRGINIA

Pine Conditions

White pine acreage increased on all areas where blister rust control work was performed in 1961 except the Shenandoah National Park. The net increase amounted to approximately 3,500 on all lands within the state. The national forests have embarked on a sizeable Timber Stand Improvement operation and white pine is one of the highly favored species being released by eliminating undesirable hardwoods. Planted white pine continues to be a factor in the annual acreage increase.

Infection Conditions

New infections on white pine within the control area were not evident except in high hazard locations on the Blue Ridge Parkway in Nelson County. Small areas of recent infection on white pine were noted on unprotected areas in Highland and Wythe Counties and at the head of Little Piney River on the Pedlar Ranger District, George Washington National Forest.

Infection on ribes was reported as generally light. Some medium to heavy infection was noted at higher elevations where ribes were growing near the source of inoculation.

Cooperative Financing

The blister rust control program on state and private land in Virginia is financed by the Virginia Department of Conservation and Development and the U. S. Forest Service. Federal financing is on a reimbursement basis for seasonal labor. Additional federal expenditures are made for project supplies, operation of federal vehicles and travel expenses of state scientific aids. The services of two district leaders are also provided by the U. S. Forest Service. Federal funds finance the entire program on national forests and national park lands.

Control Operations

A total of 108,800 acres were surveyed for control purposes. Intensive eradication was required on 8,400 acres or, approximately 8% of the base acres involved. Some 28,000 acres were placed on a "No Further Work" basis, subject to cursory examinations only. The net control area was reduced by 27,600 acres as the result of pine evaluation and adjustments to control boundaries.

SUMMARY OF ACCOMPLISHMENTS

Ownership	E R A D I C A T I O N						S U R V E Y S	
	I N T E N S I V E L Y W O R K E D A R E A						A L L T Y P E S	
	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P	512	886	2,433	3,831	582	21	62,070	283
Geo. Wash. N. F.	50	1,141	2,887	4,078	630	12	32,093	139
Jeff. N.F.	52	241	11	304	58	6	11,594	42
Shen. N.P.	-	-	67	67	11	-	2,265	79
Blue Rdg. Pkway	-	125	-	125	21	2	805	15
Total	614	2,393	5,398	8,405	1,302	41	108,827	558

* Thousands

STATUS OF CONTROL

Ownership	CONTROL AREA ACREAGE					No Further Work	Scheduled for Exam 1962
	White Pine	Control Area	Initial Worked	On Maintenance			
				Acres	%		
S&P	540,255	1,410,598	1,403,150	1,370,230	97.1	755,340	126,005
Geo.Wash. N.F.	193,324	415,578	415,375	386,316	92.9	93,680	46,239
Jeff. N.F.	64,323	126,702	126,702	122,451	96.6	50,031	11,392
Shendoah N.P.	3,080	14,270	14,270	14,270	100	-	2,102
Blue Rdg. Pkway	507	1,780	1,780	1,583	88.9	-	-
Total	801,489	1,968,928	1,961,277	1,894,850	96.2	899,051	185,738

WEST VIRGINIA

Pine Conditions

The net increase in white pine acreage for 1961 amounted to 1,912 acres. This was mostly in the southern counties of Mercer, Raleigh and Summers. Preston County in the northern part of the state also showed increased acreage on plantations which have been added to the control area. White pine is being planted in most counties with the greatest quantities in areas where little white pine exists as a native tree.

Infection Conditions

Only occasional new infections are being observed within the control area. Heaviest infection over sizeable areas was found in Mercer and Raleigh Counties. These areas were discarded from control in the mid-forties because of low stocking. A large number of the areas now have sufficient white pine to justify control work. Infection became established during the intervening years.

Infection on Ribes varied by localities. In the northern part of the state it was considered heavy while southward the infection was light.

Cooperative Financing

Control of blister rust on state and private lands is financed cooperatively. State funds are provided through the West Virginia Department of Agriculture and West Virginia Department of Natural Resources. Federal funds are provided on a reimbursement basis to the West Virginia Department of Agriculture. Federal funds provide adequate financing on the national forests.

Control Operations

Control operations were carried out on state and private lands. The George Washington and Monongahela National Forests. Approximately one third of the examined area on state and private land was found to require systematic eradication. The base acres examined amounted to 64,300 acres or, 34% more than was scheduled for survey in 1961. Eradication on the national forests was completed according to schedule.

SUMMARY OF ACCOMPLISHMENTS

Ownership	E R A D I C A T I O N						S U R V E Y S	
	I N T E N S I V E L Y W O R K E D A R E A						A L L T Y P E S	
	Initial	Rework	Maint. Work	Total Acres	Total Man Days	Ribes * Destroyed	Acres	Man Days
S&P	2,238	8,868	9,924	21,030	2,576	155	49,792	251
Geo.Wash. N.F.	-	637	65	702	83	3	6,877	32
Mongh. N.F.	-	105	1,342	1,447	42	2	8,055	40
Totals	2,238	9,610	11,331	23,179	2,701	160	64,724	323

* Thousands

STATUS OF CONTROL

Owner-ship	CONTROL AREA ACREAGE					No Further Work	Scheduled for Exam. 1962
	White Pine	Control Area	Initial Worked	On Maintenance			
				Acres	%		
S&P	241,899	492,157	490,344	455,875	92.6	141,522	44,071
G.Wash. N.F.	42,203	68,898	68,898	63,059	91.5	4,965	5,326
Mongh. N.F.	64,323	126,702	126,702	122,451	96.6	24,607	12,131
Total	348,425	687,757	685,944	641,385	93.2	171,094	61,528

APPENDIX

Statistical Tables

SUMMARY OF BLISTER RUST CONTROL ACTIVITIES BY PROGRAMS

(Current Year Data)

REGION
Region 7
ADMINISTRATIVE UNIT (if applicable)
S & P FCALENDAR YEAR
1961

INSTRUCTIONS: This report includes a summary of totals taken from all program reports on forms 5200-3 through 5200-5.

1 Report ribes destroyed by thousands. 2 Report sum of initial work, rework and maintenance work.

ACTIVITY	MEASURES OF ACCOMPLISHMENT		PROGRAM					BUREAU OF INDIAN AFFAIRS	BUREAU OF LAND MANAGEMENT	TOTAL
	1	2	STATE AND PRIVATE	NATIONAL FOREST	NATIONAL PARK	6	7			
PREMAINTENANCE WORK	SURVEY WORK	Acres covered	246,171	9,426	671			8	256,268	
		Effective man-days	2,167	58	11			2,236		
		Acres initial work	12,067	172	-			12,239		
	RIBES ERADICA- TION WORK	Acres rework	31,168	2,124	125			33,417		
		Total acres	43,235	2,296	125			45,656		
		Effective man-days	5,026	359	21			5,406		
MAINTENANCE WORK	TO MAINT.	Ribes destroyed 1	847	17	1		865			
		Acres	50,054	901	1,240		52,195			
		Acres covered	1,325,367	50,671	6,097		1,582,135			
	SURVEY WORK	Effective man-days	10,073	222	144		10,439			
		Acres worked	37,173	4,305	67		41,545			
		Effective man-days	4,109	458	11		4,578			
DIRECT TREATMENT OF WHITE PINE	SURVEY WORK	Ribes destroyed 1	873	8	1		882			
		Acres covered	-				-			
		Effective man-days	-				-			
	CANKER PRUNING WORK	Acres covered	5				5			
		Trees treated	221				221			
		Effective man-days	19				19			
ANTIBIOTIC WORK	Acres covered					-				
	Trees treated	Experimental only				-				
	Effective man-days									
TOTALS	SURVEY WORK	Acres covered	1,771,538	60,097	6,768		1,838,403			
		Effective man-days	12,240	280	155		12,675			
		Acres worked 2	80,408	6,601	192		87,201			
	RIBES ERADICA- TION WORK	Effective man-days	9,135	817	32		9,984			
		Ribes destroyed 1	1,720	25	2		1,747			
		Acres covered	5	-	-		5			
DIRECT TREATMENT	Trees treated	221	-	-		221				
	Effective man-days	19	-	-		19				
	TOTAL EFFECTIVE MAN-DAYS		21,394	1,097	187		22,678			

SUMMARY OF PREMAINTENANCE WORK

(Current Year Data)

REGION	ADMINISTRATIVE UNIT (if applicable) S & P F	CALENDAR YEAR 1961
R-7		

(Indicate Program)
☒ State and Private
☐ National Forest
☐ National Park
☐ Bureau of Indian Affairs
☐ Bureau of Land Management

INSTRUCTIONS: ¹ Use of this column is optional except for Department of Interior programs. ² Use only for BLM programs. ³ Use only for Department of Interior programs and report lands other than Interior lands that are worked with Interior funds to protect their lands. Report ownership status of such lands under "Remarks".

STATE	ADMINISTRATIVE UNIT 1	O&C OR PD2	SURVEY WORK		RIBES ERADICATION WORK					ACRES GOING TO MAINTENANCE
			ACRES	EFFECTIVE MAN-DAYS	ACRES INITIAL	ACRES REWORK	TOTAL ACRES	EFFECTIVE MAN-DAYS	THOUSANDS OF RIBES DESTROYED	
1	2	3	4	5	6	7	8	9	10	11
Maine New Hampshire Vermont Massachusetts Connecticut Rhode Island New York New Jersey Pennsylvania Delaware Maryland West Virginia Virginia Kentucky			75,439	973	214	1,933	2,147	642	144	32,231
			50,428	373	762	154	916	76	88	13,133
			10,382	85	819	140	959	59	8	-
			20,462	270	8	246	254	40	13	4,690
			-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-
			51,875	276	2,748	18,560	21,308	1,565	164	-
			-	-	-	-	-	-	-	-
			10,731	56	1,266	150	1,416	274	68	-
			-	-	-	-	-	-	-	-
			6,742	22	3,500	231	3,731	674	239	-
			14,875	81	2,238	8,868	11,106	1,516	116	-
			5,237	31	512	886	1,398	180	7	-
			-	-	-	-	-	-	-	-
	Total O&C2									
Total Public Domain2										
Total Other Land3										
GRAND TOTAL			246,171	2,167	12,067	31,168	43,235	5,026	847	50,054

Remarks:

* Including ribes destroyed on surveys

** Net increase over 1960

SUMMARY OF PREMAINTENANCE WORK

(Current Year Data)

(Indicate Program)
☐ State and Private
☒ National Forest
☐ National Park
☐ Bureau of Indian Affairs
☐ Bureau of Land Management

REGION	ADMINISTRATIVE UNIT (if applicable)	CALENDAR YEAR
Region 7	S & P F	1961

INSTRUCTIONS: ¹ Use of this column is optional except for Department of Interior programs. ² Use only for BLM programs. ³ Use only for Department of Interior programs and report lands other than Interior lands that are worked with Interior funds to protect their lands. Report ownership status of such lands under 'Remarks'.

STATE	ADMINISTRATIVE UNIT ¹	O&C OR PD ²	SURVEY WORK		RIBES ERADICATION WORK				ACRES GOING TO MAINTENANCE	
			ACRES	EFFECTIVE MAN-DAYS	ACRES INITIAL	ACRES REWORK	TOTAL ACRES	EFFECTIVE MAN-DAYS	THOUSANDS OF RIBES DESTROYED	ACRES
1	2	3	4	5	6	7	8	9	10	11
Maine	White Mtn.		1,043	17	-	-	-	-	-	-
New Hamp.	White Mtn.		30	1	70	-	70	4	2	-
Virginia	Geo. Wash.		4,023	22	50	1,141	1,191	210	6	-
Virginia	Jefferson		990	3	52	241	293	57	6	-
W. Virginia	Geo. Wash.		1,885	10	-	637	637	76	3	761
W. Virginia	Monongahela		1,455	5	-	105	105	12	-	140

Total O&C ²										
Total Public Domain ²										
Total Other Land ³										
GRAND TOTAL			9,426	58	172	2,124	2,296	359	17	901

Remarks: * Including ribes destroyed on surveys
 ** Net increase from 1960

1900

1901

1902

1903

1904

1905

1906

1907

1908

1909

1910

1911

1912

1913

SUMMARY OF PREMAINTENANCE WORK
(Current Year Data)

REGION	ADMINISTRATIVE UNIT (if applicable)	CALENDAR YEAR
Region 7	S & P F	1961

INSTRUCTIONS: ¹ Use of this column is optional except for Department of Interior programs. ² Use only for BLM programs. ³ Use only for Department of Interior programs and report lands other than Interior lands that are worked with Interior funds to protect their lands. Report ownership status of such lands under "Remarks".

STATE	ADMINISTRATIVE UNIT ¹	O&C OR PD ²	SURVEY WORK		RIBES ERADICATION WORK				THOUSANDS OF RIBES DESTROYED		ACRES GOING TO MAINTENANCE
			ACRES	EFFECTIVE MAN-DAYS	ACRES INITIAL	ACRES REWORK	TOTAL ACRES	EFFECTIVE MAN-DAYS			
1	2	3	4	5	6	7	8	9	10 *	11 **	
Virginia	Blue Ridge Parkway		671	11	-	125	125	21	1	1,240	
Total O&C ² →											
Total Public Domain ² →											
Total Other Land ³ →											
GRAND TOTAL			671	11	-	125	125	21	1	1,240	

Remarks: * Including ribes destroyed on surveys
** Net increase over 1960

1000

10

1000

1000

1000

SUMMARY OF MAINTENANCE WORK
(Current Year Data)

REGION Region 7	ADMINISTRATIVE UNIT (if applicable) S & P F	CALENDAR YEAR 1961
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INSTRUCTIONS: ¹ Use of this column is optional except for Department of Interior programs. ² Use only for BLM programs. ³ Use only for Department of Interior programs and report lands other than Interior lands that are worked with Interior funds to protect their lands. Report ownership status of such lands under "Remarks".

STATE 1	ADMINISTRATIVE UNIT ¹ 2	O&C OR PD ² 3	SURVEY WORK		RIBES ERADICATION WORK		
			ACRES COVERED 4	EFFECTIVE MAN-DAYS 5	ACRES WORKED 6	EFFECTIVE MAN-DAYS 7	THOUSANDS OF RIBES DESTROYED 8 *
Maine			239,871	2,071	2,242	602	215
New Hampshire			398,359	2,795	717	165	258
Vermont			61,104	439	2,796	323	37
Massachusetts			65,331	290	85	37	7
Connecticut			45,690	307	6,357	244	57
Rhode Island			-	-	-	-	-
New York			524,307	3,361	11,677	1,113	230
New Jersey			-	-	-	-	-
Pennsylvania			98,955	388	942	163	16
Delaware			-	-	-	-	-
Maryland			-	-	-	-	-
West Virginia			34,917	170	9,924	1,060	39
Virginia			56,833	252	2,433	402	14
Kentucky			-	-	-	-	-
Total O&C ²							
Total Public Domain ²							
Total Other Land ³							
GRAND TOTAL			1,525,367	10,073	37,173	4,109	873

Remarks: * Including ribes destroyed on surveys

1912

1913

1914

1915

1916

1917

1918

1919

1920

SUMMARY OF MAINTENANCE WORK

(Current Year Data)

REGION Region 7	ADMINISTRATIVE UNIT (if applicable) S & P F	CALENDAR YEAR 1961
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INSTRUCTIONS: ¹ Use of this column is optional except for Department of Interior programs. ² Use only for Department of Interior programs and report lands other than Interior lands that are worked with Interior funds to protect their lands. Report ownership status of such lands under "Remarks".

STATE 1	ADMINISTRATIVE UNIT ¹	O&C OR PD ²	SURVEY WORK		RIBES ERADICATION WORK		
			ACRES COVERED	EFFECTIVE MAN-DAYS	ACRES WORKED	EFFECTIVE MAN-DAYS	THOUSANDS OF RIBES DESTROYED
			4	5	6	7	8 *
New Hampshire	White Mtn.		405	9	-	-	-
Virginia	Geo. Wash.		28,070	117	2,887	420	6
	Jefferson		10,604	39	11	1	-
West Virginia	Geo. Wash.		4,992	22	65	7	-
	Monongahela		6,600	35	1,342	30	2
Total O&C ²							
Total Public Domain ²							
Total Other Land ³							
GRAND TOTAL			50,671	222	4,305	458	8

Remarks: * Including ribes destroyed on surveys

U. S. DEPARTMENT OF AGRICULTURE
Forest Service

SUMMARY OF MAINTENANCE WORK
(Current Year Data)

REGION
Region 7

ADMINISTRATIVE UNIT (if applicable)
S & P F

CALENDAR YEAR
1961

(Indicate program)
☐ State and Private
☐ National Forest
☒ National Park
☐ Bureau of Indian Affairs
☐ Bureau of Land Management

INSTRUCTIONS: ¹ Use of this column is optional except for Department of Interior programs, ² Use only for BLM programs, ³ Use only for Department of Interior programs and report lands other than Interior lands that are worked with Interior funds to protect their lands. Report ownership status of such lands under "Remarks".

STATE	ADMINISTRATIVE UNIT ¹	O&C OR PD ²	SURVEY WORK		RIBES ERADICATION WORK		
			ACRES COVERED	EFFECTIVE MAN-DAYS	ACRES WORKED	EFFECTIVE MAN-DAYS	THOUSANDS OF RIBES DESTROYED
1		3	4	5	6	7	8 *
Maine	Acadia		3,698	61	-	-	-
Virginia	Shenendoah		2,265	79	67	11	-
Virginia	Blue Ridge Pk'way		134	4	-	-	1
Total O&C ²							
Total Public Domain ²							
Total Other Land ³							
GRAND TOTAL			6,097	144	67	11	1

Remarks: * Including ribes destroyed on surveys

5200-4 (8/60)

SUMMARY OF DIRECT TREATMENT OF WHITE PINE

(Current Year Data)

(Indicate program)
☒ State and Private
☐ National Forest
☐ National Park
☐ Bureau of Indian Affairs
☐ Bureau of Land Management

CALENDAR YEAR
1961

ADMINISTRATIVE UNIT (if applicable)
S & P F

FS REGION Region 7

INSTRUCTIONS: ¹ Use of this column is optional except for Department of Interior programs. ² Use only for BLM programs. ³ Use only for Department of Interior programs and report lands other than Interior lands that are worked with Interior funds to protect their lands. Report ownership status of such lands under "Remarks".

STATE	AD- MINISTRATIVE UNIT ¹	O&C OR PD ²	SURVEY WORK		PRUNING CANKERS			ANTIBIOTIC TREATMENT **		
			ACRES COVERED	EFFECTIVE MAN-DAYS	ACRES ³	TREES @	EFFECTIVE MAN-DAYS	ACRES	TREES	EFFECTIVE MAN-DAYS
1	2	3	4	5	6	7	8	9	10	11
New York					2	1,245	7.0			
Maryland					1	350	1.5			
Virginia					2	1,200	10.0			
West Va.					-	30	1.0			
Total O&C Land ² →										
Total Public Domain Land ² →										
Total Other Land ³ →										
GRAND TOTAL			5			2,825	19.5			

Remarks: * Estimated

** All antibiotic treatments in R-7 were of an experimental nature. @ Trees examined

STATUS OF RIBES ERADICATION BY STATES

(Net Accumulative Data)

REGION	Region 7	RESERVATION, PARK, OR OTHER SUBDIVISION ¹	ADMINISTRATIVE UNIT (if applicable) S & P F		CALENDAR YEAR 1961		Bureau of Land Management ☐ Summary of all programs			
STATE	1	2	CONTROL AREA		WORKED INITIALLY		PREMAINTENANCE WORK REMAINING		ACRES ON MAINTENANCE	PERCENT OF COL. 4 ON MAIN- ENANCE
			ACRES OF WHITE PINE	CONTROL ACREAGE WHITE PINE AND PROTECTION ZONE	ACRES	PERCENT OF COL. 4	ACRES INITIAL WORK (Column 4, minus 5)	ACRES REWORK (Column 5, minus 9)		
	1	2	3	4	5	6	7	8	9	10
Maine			949,158	2,140,305	2,080,058	97.1	60,247	181,506	1,898,552	88.7
New Hampshire			1,235,581	2,383,566	2,383,062	99.9	504	57,231	2,325,831	97.6
Vermont			171,983	646,776	633,787	97.9	12,989	82,511	551,276	85.2
Massachusetts			584,944	1,408,011	1,407,866	99.9	145	29,828	1,378,038	97.9
Connecticut			109,761	468,324	468,324	100.0	-	-	468,324	100.0
Rhode Island			64,018	147,778	147,778	100.0	-	-	147,778	100.0
New York			700,522	1,980,947	1,969,875	99.4	11,072	166,035	1,803,840	91.0
New Jersey			3,771	16,742	16,742	100.0	-	-	16,742	100.0
Penna.			105,695	465,545	461,815	99.1	3,730	20,515	441,300	94.7
Delaware			242	6,186	6,186	100.0	-	-	6,186	100.0
Maryland			72,891	171,813	171,813	100.0	-	19,369	152,444	88.7
W. Virginia			241,899	492,157	490,344	99.6	1,813	34,469	455,875	92.6
Virginia			540,255	1,410,598	1,403,150	99.4	7,448	32,920	1,370,230	97.1
Kentucky			31,199	114,312	114,312	100.0	-	-	114,312	100.0

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1.10	500,000	100,000	100,000	100,000
2.00	100,000	20,000	20,000	20,000
3.00	100,000	20,000	20,000	20,000
4.00	100,000	20,000	20,000	20,000
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6.00	100,000	20,000	20,000	20,000
7.00	100,000	20,000	20,000	20,000
8.00	100,000	20,000	20,000	20,000
9.00	100,000	20,000	20,000	20,000
10.00	100,000	20,000	20,000	20,000
11.00	100,000	20,000	20,000	20,000
12.00	100,000	20,000	20,000	20,000
13.00	100,000	20,000	20,000	20,000
14.00	100,000	20,000	20,000	20,000
15.00	100,000	20,000	20,000	20,000
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STATUS OF RIBES ERADICATION BY STATES

(Net Accumulative Data)

(Indicate program)

- ☐ State and Private
☒ National Forest
☐ National Park
☐ Bureau of Indian Affairs
☐ Bureau of Land Management
☐ Summary of all programs

REGION	Region 7	ADMINISTRATIVE UNIT (if applicable) S & P F		WORKED INITIALLY		PREMAINTENANCE WORK REMAINING		ACRES ON MAINTENANCE	PERCENT OF COL. 4 ON MAIN-ENANCE
		ACRES OF WHITE PINE	CONTROL AREA ACREAGE WHITE PINE AND PROTECTION ZONE	ACRES	PERCENT OF COL. 4	ACRES INITIAL WORK (Column 4, minus 5)	ACRES REWORK (Column 5, minus 9)		
STATE	RESERVATION, PARK, OR OTHER SUBDIVISION ¹	3	4	5	6	7	8	9	10
1	2								
Maine	White Mtn.	839	1,533	1,533	100.0	-	-	1,533	100.0
New Hampshire	White Mtn.	1,173	2,194	2,194	100.0	-	-	2,194	100.0
Vermont	Green Mtn.	439	1,826	1,826	100.0	-	-	1,826	100.0
Penna.	Allegheny	1,037	4,475	4,235	94.6	240	275	3,960	88.4
West Virginia	Monongahela	47,935	88,894	88,894	100.0	-	3,435	85,459	96.1
Virginia	Geo. Wash.	42,203	68,898	68,898	100.0	-	5,839	63,059	91.5
	Geo. Wash.	193,324	415,578	415,375	99.9	203	29,059	386,316	92.9
	Jefferson	64,323	126,702	126,702	100.0	-	4,251	122,451	96.6
Kentucky	Cumberland	16,980	32,002	32,002	100.0	-	-	32,002	100.0
TOTALS		368,253	742,102	741,659	99.4	443	42,859	698,800	94.1

¹ Use of this column optional except for reporting Dept. of the Interior Lands.

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STATUS OF RIBES ERADICATION BY STATES (Net Accumulative Data)

REGION		ADMINISTRATIVE UNIT (if applicable)		CALENDAR YEAR		(Indicate program)			
Region 7		S & P F		1961		☐ State and Private ☐ National Forest ☒ National Park ☐ Bureau of Indian Affairs ☐ Bureau of Land Management ☐ Summary of all programs			
STATE	RESERVATION, PARK, OR OTHER SUBDIVISION ¹	CONTROL AREA		WORKED INITIALLY		PREMAINTENANCE WORK REMAINING		ACRES ON MAINTENANCE	PERCENT OF COL. 4 ON MAIN-ENANCE
		ACRES OF WHITE PINE	CONTROL ACREAGE WHITE PINE AND PROTECTION ZONE	ACRES	PERCENT OF COL. 4	ACRES INITIAL WORK (Column 4, minus 5)	ACRES REWORK (Column 5, minus 9)		
1	2	3	4	5	6	7	8	9	10
Maine	Acadia	3,500	17,318	17,318	100.0	-	-	17,318	100.0
New York	Saratoga	145	1,550	1,550	100.0	-	-	1,550	100.0
New York	Battlefield	12	105	105	100.0	-	-	105	100.0
Virginia	Hyde Park	3,080	14,270	14,270	100.0	-	-	14,270	100.0
Virginia	Shenendoah	507	1,780	1,780	100.0	-	197	1,583	88.9
Virginia	Blue Ridge								
TOTALS		7,244	35,023	35,023	100.0	-	197	34,826	99.4

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